UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/632,017	08/02/2000	Jerry Wynn Brimer	NORTH-358G/A-2185 D1	1088

7590 08/07/2002

BRUCE B. BRUNDA
STEINA , BRUNDA, GARRED & BRUCKER
75 ENTERPRISE, SUITE 250
ALISO VIEJO, CA 92656

EXAMINER
JACKSON, MONIQUE R

ART UNIT	PAPER NUMBER
1773	19

DATE MAILED: 08/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/632,017	BRIMER ET AL.	
	Examiner	Art Unit	
	Monique R Jackson	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 May 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/23/02 has been entered.

2. Claims 16-25 are pending in the application. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 16-25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 16 recites the limitation, "A metal structure comprising an acid containing steel surface having deposited thereon an adhesive mixture of an acid-impervious polymer particulate and a high curing temperature powder adhesive...the adhesive mixture being operative to form an acid-impervious barrier at temperatures above 500°F to mitigate the acid of the steel surface from penetrating therethrough." According to this amended claim, the Applicant is now claiming an invention that can be illustrated as follows:

Acid-impervious polymer barrier
Acid-containing steel surface
Metal structure

However, the original disclosure at the time of filing clearly states that the invention is directed to an acid impervious polymer barrier applied to a metal structure or fixture to "provide a substantially acid-impervious metal substrate that comes into contact with **another substrate whose chemical acidity acts to leach any available iron from the metal substrate**...In particular, resin-impregnated fiber of polymer composite material is placed on a steel curing fixture to give parts made therefrom a desired shape. The composite material is vacuum-bagged to the steel fixture and cured...However, certain high-temperature **polymer composite materials...will corrode the steel fixture**...It has been found that the reason for the above described corrosion and poor product yield is due to **acid from the composite material acting to leach iron from the steel fixture**. Because of the resulting untoward effect, it is most important to **block acid passage into the fixture** to thereby prevent iron leaching into the fabricated part. Accordingly, a primary object of the present invention is to provide methodology for providing a coating to a metal surface such as the surface of a steel curing fixture to thereby render that surface substantially acid impervious." (Page 1, line 19-Page 2, line 16, emphasis added, also refer to Figures 1-2 of the instant disclosure.) Hence, according to the original disclosure at the time of filing, the steel surface is **not acid-containing** as instantly

claimed and the acid-impervious polymer layer **does not mitigate the acid of the steel surface from penetrating therethrough** but actually provides a barrier between the steel surface and an acid-containing composite material, i.e. as illustrated below.

Acid-containing composite material
Acid-impervious polymer barrier
Steel surface
Metal structure

Similarly, Claim 20 recites the limitation, "A metal curing fixture comprising an acid containing steel surface having deposited thereon a mixture of an acid-impervious polymer particulate and a high curing temperature powder adhesive...the adhesive mixture being operative to form an acid-impervious barrier at temperatures above 500°F to mitigate the acid of the steel surface from penetrating therethrough" and hence, the same reasons as stated above for Claim 16 apply. Further, it is noted that the original disclosure at the time of filing does not provide support for the limitations "high curing temperature powder adhesive" and "the adhesive having a curing temperature lower than a melting temperature of said particulate". Though the original disclosure at the time of filing states that "the powder adhesive in all cases of course cures below the temperature-resistant level of the polymer particulate" (Page 3, lines 15-17) and further states "a non-cured powder adhesive preferably heat-curable, with such heat curing occurring at a temperature below the temperature tolerance of the polymer particulate", the original disclosure at the time of filing does not clearly convey to one skilled in the art that "the temperature-resistant level" or the "temperature tolerance" of the polymer particulate is the melting

temperature of the polymer particulate given that it could refer to a softening temperature or a glass transition temperature or a decomposition temperature. It is also noted that with regards to the limitation "high curing temperature powder adhesive", the original disclosure only recites that the preferred powder adhesive cures below 650°F or below the acid-impervious level of the polymer particulate, wherein the term "below" could include temperatures as low as room temperature which would not be conveyed to one as a "high curing temperature". The original disclosure provides an upper limit but no lower limit for the curing temperature and therefore one having ordinary skill in the art would not have reasonably interpreted the original disclosure to convey an invention formed from a **high** curing temperature powder adhesive.

5. Claims 16-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "high curing temperature powder adhesive" in claims 16 and 20 is a relative term which renders the claim indefinite. The term "high" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The original disclosure at the time of filing states that the preferred adhesive powder heat-cures "at a temperature below about 650°F" and that "the powder adhesive in all cases of course cures below the acid-impervious level of the polymer particulate". Hence, the specification only provides an upper limit but never specifies a lower limit and therefore could include heat cure temperatures of 300°F or 100°F or even room temperature, wherein room temperature is not typically recognized in the art as a high temperature. Therefore, given that there is no guidance with regards to the term "high", it is not clear what is meant to be encompassed by the claims.

Response to Arguments

6. Applicant's arguments filed 5/23/02 have been fully considered but they are not persuasive. The Applicant argues that the proposed amendments do not contain new matter and refers the Examiner to particular portions of the original disclosure that support the claimed invention. However, the Examiner refers the Applicant to the above reasons for the new matter rejections, noting that the original disclosure at the time of filing does not describe explicitly or inherently a metal structure or fixture comprising a steel surface wherein the steel surface contains acid, or wherein an acid-impervious layer provides a barrier to mitigate the acid of the steel surface from penetrating through the acid-impervious layer, or a high temperature curing powder adhesive, or curing the powder adhesive at a temperature below the melting temperature of the polymer particulate. The Examiner has reviewed the sections noted by the Applicant but does not believe these sections or any other sections in the original disclosure provide the necessary support for the instantly claimed limitations. The first term "acid containing steel surface" and the last term "mitigate the acid of the steel surface from penetrating theretrough" have been discussed in detail above. The Applicant refers to Page 4, lines 16-20, which states "in the production of composite parts made from material that has an acid content", however, throughout the specification it is clear that the acid is contained in the composite material not the steel surface and that the acid-impervious layer acts as a barrier between the steel surface and the acid containing composite material to prevent acid from penetrating through the barrier to the steel surface and leaching iron from the steel surface into the composite material, refer to pages 1-4 and figures 1-2 of the instant disclosure. As for the second term, "high curing temperature",

this term is also discussed in detail above and even the sections noted by the Applicant actually support the Examiner's position that the original disclosure only provides an upper limit and not a lower limit and hence would not reasonably convey an invention with "high curing temperature" powder adhesive given that room temperature falls within the temperature limit of the original disclosure and is not typically considered a "high" temperature. With regards to the term "a curing temperature lower than a melting temperature", the Applicant refers to sections of the specification that recite curing "below" a temperature, however, the temperature is expressed as "the temperature-resistant level of the polymer particulate" and "the temperature tolerance of the polymer particulate" but never as the "melting temperature of the polymer particulate". The original disclosure at the time of filing never defines "temperature-resistant level" or "temperature tolerance" as the "melting temperature" or even suggests that "temperature-resistant level" or "temperature tolerance" equates to "melting temperature". Therefore, it is not clear that these terms are defined as the melting temperature given that they could refer to a softening temperature, or a glass transition temperature, or a decomposition temperature.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 703-308-0428. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Monique R. Jackson
Patent Examiner
Technology Center 1700
August 5, 2002